

# NMCP COVID-19 Literature Report #19: Friday, 05 June 2020

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Disclaimer: I am not a medical professional. This document is current as of the date noted above. While I make every effort to find and summarize available data, things are changing rapidly, with new research and potentially conflicting literature published daily. Best practice and evidence are constantly shifting during this international public health crisis.

Reports are biweekly, planned for Tuesdays and Fridays.

## Statistics

*Global* 6,672,287 confirmed cases and 391,773 deaths in 188 countries/regions

*United States\** top 5 states by cases (Virginia is ranked 12th)

	TOTAL	NY	NJ	IL	CA	MA
Confirmed Cases	1,874,411	375,133	162,530	124,759	122,936	102,063
Tested	18,680,529	2,293,032	857,729	982,016	2,182,671	624,935
Recovered	NA	66,756	11,970	NA	NA	NA
Deaths	108,238	30,174	27,231	5,736	4,454	7,201

\*see [census.gov](https://census.gov) for current US Population data; NA: not all data available

[JHU CSSE](https://jhu-csse.org) as of 1200 EDT Friday, 05 June 2020

## *Navy (Department of Defense)*

	TOTAL	MIL	CIV	DEP	CTR
Cases	916	728	83	48	57
Hospitalized	7	1	4	0	2
Recovered	2,364	1,791	331	137	105
Deaths	12	1	8	0	3
Cumulative*	3,292	2,520	422	185	165

\*cumulative total = active + recovered + deaths

[DOD](https://dod.defense.gov) dated Thursday, 04 June 2020

<i>Virginia</i>	Total	Chesapeake	Hampton	Newport News	Norfolk	Portsmouth	Suffolk	Virginia Beach
Cases	48,532	563	215	309	560	325	322	784
Hospitalized	5,008	91	33	41	71	47	53	102
Deaths	1,453	15	4	10	6	11	33	25

[VA DOH](https://va.doh.gov) as of 1200 EDT Friday, 05 June 2020

## State of the COVID Literature

According to LitCovid, the curated literature hub for tracking up-to-date scientific information about the 2019 novel coronavirus, there are 18,791 articles on the topic in PubMed as of this writing ([LitCovid](#)). COVID-19 Primer, another literature tracker that includes preprints and other sources not found in PubMed, there are 22,895 cumulative papers since 22 January 2020—2,484 new papers in the past seven days ([Primer](#)).

Reading the literature can be challenging, especially within the new body of articles on COVID-19 ([NYT](#)). While new tools may help clinicians and researchers deal with the influx of literature on COVID, there amount can be overwhelming ([Science](#)). Outside of the sheer volume of literature on COVID, the pandemic may permanently affect scientific and scholarly publishing; the rush to embrace preprints is evidence of the change happening ([Nature](#)).

### *Rise of the Preprints*

Preprints are preliminary reports that have not been peer-reviewed. Although preprint servers are not new in scientific disciplines—physicists have been relying on them to share and discuss their field since the early 1990s—medicine has been slow to embrace them, until fairly recently ([Med Ref Serv Q](#)).

BioRxiv and medRxiv, the two major preprint servers for biomedical literature, have entered the mainstream with the pandemic. Because they are preliminary and have not undergone peer review, the preprint servers note that "[t]hey should not be regarded as conclusive, guide clinical practice/health-related behavior, or be reported in news media as established information" ([medRxiv](#)). The lack of peer review with preprints could be problematic, but peer-reviewed articles are not without their own problems.

### *Surgisphere Controversy*

This week, an evolving story spotlights the potential problems of fast-tracking publishing research articles—even for those that have been through the peer review process ([Guardian](#) [hcq]). At the center of the controversy is data from a company called Surgisphere and questions of how the data was obtained ([Guardian](#) [hcq]).

Two major, peer-reviewed studies have been published in prestigious journals using data from Surgisphere: one on the use of ACE inhibitors or ARBs in COVID-19 patients ([NEJM](#) [cardio]), the other on the use of hydroxychloroquine (HCQ) or chloroquine for treatment of COVID-19 ([Lancet](#) [hcq]). Based in part on The Lancet article, the World Health Organization and other research groups stopped other trials looking at the therapeutic use of HCQ in COVID patients ([Guardian](#) [who]).

### *Timeline*

01 May: The New England Journal of Medicine publishes 'Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19' ([NEJM](#) [cardio]).

22 May: The Lancet publishes 'Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis' ([Lancet \[hcq\]](#)).

25 May: NPR reports the WHO halts its HCQ trial over safety concerns based on The Lancet paper ([NPR](#)).

26 May: An article on MedPage Today describes Twitter threads, blog posts, and other discussions raising concerns about The Lancet HCQ study ([MedPage \[hcq\]](#)).

02 June: The New England Journal of Medicine publishes the 'expression of concern' regarding the 01 May article ([NEJM \[eoc\]](#)). Science reports 'a mysterious company's coronavirus papers in top medical journals may be unraveling' ([Science](#)).

03 June: The Lancet publishes the 'expression of concern' regarding the 22 May article ([Lancet \[eoc\]](#)). Later in the day the WHO states it would resume the HCQ arm of their Solidarity trial ([STAT](#)). MedPage Today reports Lancet and NEJM will conduct independent data reviews ([MedPage \[surgisphere\]](#)).

04 June: Mid-afternoon eastern US time, The Lancet releases a statement of retraction ([Lancet \[retract\]](#)):

"Today, three of the authors of the paper, 'Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis', have retracted their study. They were unable to complete an independent audit of the data underpinning their analysis. As a result, they have concluded that they 'can no longer vouch for the veracity of the primary data sources.' The Lancet takes issues of scientific integrity extremely seriously, and there are many outstanding questions about Surgisphere and the data that were allegedly included in this study. Following guidelines from the Committee on Publication Ethics (COPE) and International Committee of Medical Journal Editors (ICMJE), institutional reviews of Surgisphere's research collaborations are urgently needed."

### *Additional Resources*

Retraction Watch has a running list of withdrawn or retracted papers and expressions of concerns (including those from preprint servers) specific to COVID-19:

<https://retractionwatch.com/retracted-coronavirus-covid-19-papers/>

Greenhalgh T. *How to Read a Paper: The Basics of Evidence-Based Medicine*. 5th edition. Wiley-Blackwell. 2014. Available through library subscription at R2. Link:

<https://www.r2library.com/Resource/Title/1118800966>

## Selected Primary Literature

*Recent—published in peer-reviewed journals within the last 7 days of report's date*

[JAMA](#): Association of Noninvasive Oxygenation Strategies With All-Cause Mortality in Adults With Acute Hypoxemic Respiratory Failure A Systematic Review and Meta-analysis (04 June 2020).

"In this systematic review and network meta-analysis that included 25 studies and 3804 patients with acute hypoxemic respiratory failure, compared with standard oxygen therapy there was a statistically significant lower risk of death with helmet noninvasive ventilation (risk ratio, 0.40) and face mask noninvasive ventilation (risk ratio, 0.83). Noninvasive oxygenation strategies compared with standard oxygen therapy were significantly associated with lower risk of death."

[BMJ](#): Kawasaki-like multisystem inflammatory syndrome in children during the covid-19 pandemic in Paris, France: prospective observational study (03 June 2020)

"What is already known on this topic

- Acute clinical manifestations of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection are less common and less severe in children than in adults
- Recent observations, however, have raised concerns about a paediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2 infection (PIMS-TS), with shock, cardiac, respiratory, renal, gastrointestinal, or neurological disorders

"What this study adds

- Kawasaki-like multisystem inflammatory syndrome temporally associated with SARS-CoV-2 infection has characteristics that differ from those of classic Kawasaki disease
- The characteristics comprise a higher frequency in children of African ancestry, predominant acute gastrointestinal symptoms, haemodynamic instability, and myocarditis
- These clinical findings should prompt high vigilance among primary care and emergency doctors, and preparedness during the coronavirus disease 2019 pandemic in countries with a high proportion of children of African ancestry and high levels of community transmission"

[J Med Virol](#): Evidence for mutations in SARS-CoV-2 Italian isolates potentially affecting virus transmission (03 June 2020)

"Italy is the first western country suffering heavy SARS-CoV-2 transmission and disease impact after Covid-19 pandemic started in China. Even though the presence of mutations on spike glycoprotein and nucleocapsid in Italian isolates has been reported, the potential impact of these mutations on viral transmission has not been evaluated. We have compared

SARS-CoV-2 genome sequences from Italian patients with virus sequences from Chinese patients. We focussed upon three non-synonymous mutations of genes coding for S(one) and N (two) viral proteins present in Italian isolates and absent in Chinese ones, using various bio-informatic tools. Amino acid analysis and changes in three-dimensional protein structure suggests the mutations reduce protein stability and, particularly for S1 mutation, the enhanced torsional ability of the molecule could favour virus binding to cell receptor(s). This theoretical interpretation awaits experimental and clinical confirmation."

[JAMA](#): Effect of Convalescent Plasma Therapy on Time to Clinical Improvement in Patients With Severe and Life-threatening COVID-19: A Randomized Clinical Trial (03 June 2020)

"Findings: In this randomized clinical trial that included 103 patients and was terminated early, the hazard ratio for time to clinical improvement within 28 days in the convalescent plasma group vs the standard treatment group was 1.40 and was not statistically significant.

Meaning: Among patients with severe or life-threatening COVID-19, convalescent plasma therapy added to standard treatment did not significantly improve the time to clinical improvement within 28 days, although the trial was terminated early and may have been underpowered to detect a clinically important difference."

[JAMA](#): Epidemiology, Clinical Features, and Disease Severity in Patients With Coronavirus Disease 2019 (COVID-19) in a Children's Hospital in New York City, New York (03 June 2020)

"Findings: In this case series of 50 children and adolescents hospitalized with COVID-19 infection, respiratory symptoms, while common, were not always present. Children hospitalized with COVID-19 commonly had comorbidities, infants had less severe disease, those with obesity were likely to receive mechanical ventilation, and elevated markers of inflammation at admission and during hospitalization were associated with severe disease.

Meaning: Expanded testing, maintaining a high suspicion for severe acute respiratory syndrome coronavirus 2 infection given the variable presentation of COVID-19, risk stratification, and recognition of findings suggestive of immune dysregulation are crucial to effective COVID-19 management in children."

[MMWR](#): Impact of the COVID-19 Pandemic on Emergency Department Visits — United States, January 1, 2019–May 30, 2020 (03 June 2020)

"The National Syndromic Surveillance Program (NSSP) collects electronic health data in real time.

NSSP found that emergency department (ED) visits declined 42% during the early COVID-19 pandemic, from a mean of 2.1 million per week (March 31–April 27, 2019) to 1.2 million (March 29–April 25, 2020), with the steepest decreases in persons aged  $\leq 14$  years, females, and the Northeast. The proportion of infectious disease–related visits was four times higher during the early pandemic period.

To minimize SARS-CoV-2 transmission risk and address public concerns about visiting the ED during the pandemic, CDC recommends continued use of virtual visits and triage help lines and adherence to CDC infection control guidance."

[NEJM](#): A Randomized Trial of Hydroxychloroquine as Postexposure Prophylaxis for Covid-19 (03 June 2020)

"METHODS: We conducted a randomized, double-blind, placebo-controlled trial across the United States and parts of Canada testing hydroxychloroquine as postexposure prophylaxis. We enrolled adults who had household or occupational exposure to someone with confirmed Covid-19 at a distance of less than 6 ft for more than 10 minutes while wearing neither a face mask nor an eye shield (high-risk exposure) or while wearing a face mask but no eye shield (moderate-risk exposure). Within 4 days after exposure, we randomly assigned participants to receive either placebo or hydroxychloroquine (800 mg once, followed by 600 mg in 6 to 8 hours, then 600 mg daily for 4 additional days). The primary outcome was the incidence of either laboratory-confirmed Covid-19 or illness compatible with Covid-19 within 14 days.

RESULTS: We enrolled 821 asymptomatic participants. Overall, 87.6% of the participants (719 of 821) reported a high-risk exposure to a confirmed Covid-19 contact. The incidence of new illness compatible with Covid-19 did not differ significantly between participants receiving hydroxychloroquine (49 of 414 [11.8%]) and those receiving placebo (58 of 407 [14.3%]); the absolute difference was -2.4 percentage points (95% confidence interval, -7.0 to 2.2; P=0.35). Side effects were more common with hydroxychloroquine than with placebo (40.1% vs. 16.8%), but no serious adverse reactions were reported.

CONCLUSIONS: After high-risk or moderate-risk exposure to Covid-19, hydroxychloroquine did not prevent illness compatible with Covid-19 or confirmed infection when used as postexposure prophylaxis within 4 days after exposure."

[Clin Infect Dis](#): Predicting infectious SARS-CoV-2 from diagnostic samples (01 June 2020)

"In this retrospective cross-sectional study, we took SARS-CoV-2 RT-PCR confirmed positive samples and determined their ability to infect Vero cell lines.... SARS-CoV-2 Vero cell infectivity was only observed for RT-PCR Ct < 24 and STT < 8 days. Infectivity of patients with Ct >24 and duration of symptoms >8 days may be low. This information can inform public health policy and guide clinical, infection control and occupational health decisions. Further studies of larger size are needed."

## Racism in Medicine

The recent protests and statement from the Chief of Naval Operations are bringing discussions of racism to the forefront ([CNO](#)). Systemic racism can have a major impact on health and wellness, contributing to healthcare disparities. As noted in previous COVID-19 reports, there is growing evidence of this occurring with the pandemic (#13; see: [SharePoint](#)). The intersection of racism and medicine predates the pandemic however, and there is a wealth of resources on the topic that may be helpful in starting discussions of race in medicine.

### *Upcoming Event*

09 June @1400-1530 EDT – Racism: The Ultimate Underlying Condition (APHA). Link: <https://www.apha.org/events-and-meetings/webinars/racial-equity>

### *Professional Groups*

American Public Health Association (APHA). Racism and Health (accessed 04 June 2020). Link: <https://www.apha.org/topics-and-issues/health-equity/racism-and-health>

National Academies, Institute of Medicine. 2003. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, DC: The National Academies Press. (accessed 04 June 2020). Link: <https://www.nap.edu/catalog/12875/unequal-treatment-confronting-racial-and-ethnic-disparities-in-health-care>

### *GME*

Nieblas-Bedolla E, Christophers B, Nkinsi NT, Schumann PD, Stein E. Changing How Race Is Portrayed in Medical Education: Recommendations From Medical Students. Acad Med. 2020 May 5. doi: 10.1097/ACM.0000000000003496. Epub ahead of print. PMID: 32379145. Link (requires Athens login if not at command): <https://oce.ovid.com/article/00001888-201411000-00014/HTML>

Medicine and Race: AMS Annotated Bibliography from Brown University's Warren Alpert Medical School. Link: [https://repository.library.brown.edu/studio/collections/id\\_791/](https://repository.library.brown.edu/studio/collections/id_791/)

NYU Health Sciences Library. Race and racism in medicine – articles, books, podcasts, videos. (accessed 04 June 2020). Link: <https://hslguides.med.nyu.edu/raceandracism>

### *Videos*

AMA Journal of Ethics, Ethics Talk: Antiracism, Health Equity, and a Post-COVID Future – a conversation with Dr Ibram Kendi (June 2020). Link: <https://journalofethics.ama-assn.org/podcast/ethics-talk-antiracism-health-equity-and-post-covid-future>

Global Health and Social Medicine | COVID-19 Webinar Series (4 videos) from Harvard Medical School. Link: [https://www.youtube.com/playlist?list=PL3C8SSfr8s-AOdF7p9qqTB\\_aiS2cnHRtA](https://www.youtube.com/playlist?list=PL3C8SSfr8s-AOdF7p9qqTB_aiS2cnHRtA)

NLM History of Medicine lecture with Angela Saini: Gender, Race, and Power in Science (31 October 2019). Link: <https://videocast.nih.gov/watch=34893>

TEDtalk series (8 videos): The link Between Health and Racism (2016 –). Link: [https://www.ted.com/playlists/567/the link between health and racism](https://www.ted.com/playlists/567/the_link_between_health_and_racism)

### **PubMed: New Look, New Way Linking to Full Text, New Features (And New Headaches)**

If you haven't looked at PubMed in a while, you may be in for a surprise. Last week, PubMed switched to its new default interface, which has new features, a different look, and changes how keyword searches are translated and presented.

The biggest difference most users will notice is the Best Match default sort, which is based on an evolving algorithm that attempts for work like Google Scholar's relevance sort. There are some growing pains with it though; until some of those issues are worked out, I would highly recommend changing the sort from Best Match to Most Recent. You can do this by clicking on the Display Options at the top right of the results page.

Use this link for new PubMed to see NMCP Library Services' "check for full text access" buttons: <https://pubmed.ncbi.nlm.nih.gov/?otool=vanmcplib>

If you aren't quite ready to make the switch, legacy (aka 'old') PubMed is still available at <https://pmlegacy.ncbi.nlm.nih.gov/pubmed>, but it won't be around for long.

Library Services offers training classes for individuals, groups, and departments in using PubMed and other information sources. Contact us for help: [usn.hampton-roads.navhospporsva.list.nmcp-library@mail.mil](mailto:usn.hampton-roads.navhospporsva.list.nmcp-library@mail.mil)

### **In Brief**

On Thursday, New York City had zero confirmed coronavirus deaths for first day since March ([NYDN](#)).

Got Type A blood? You could be at greater risk for COVID-19. You can probably thank your genes for that ([NYT](#)).

"Cohort studies that follow populations over years have quickly pivoted to trace the pandemic's physical, mental and social consequences" ([Nature](#)).

Long read: "The C.D.C. Waited 'Its Entire Existence for This Moment.' What Went Wrong?" ([NYT](#))



### *Spreading COVID*

All 01 passengers on flight from Qatar are under quarantine in Greece after 12 tested positive for coronavirus ([Guardian](#)).

A Dutch study suggests that children under the age of 12 play little role in transmitting the new coronavirus ([RIVM](#)).

Scientists are struggling to show how the coronavirus passed from animals to people ([Nature](#)).

### *Vaccines and Treatments*

Operation Warp Speed picks 5 candidates as the most likely viable coronavirus vaccine ([CIDRAP](#)).

AstraZeneca, which is working on one of the 5 vaccines picked by OWS, says it has a goal of producing 2 billion doses of their coronavirus vaccine—and they could be ready by fall ([CNBC](#)).

Want to know what is being developed and evaluated for COVID? Check out the 'lifeline pipeline' ([Reuters](#)).

The pandemic could make drug development and trials quicker and easier ([Nature](#)).

### *Contact Tracing*

As states and communities ramp up contact tracing—for example, the Virginia Department of Health requested 1,300 contractors to help with contact tracing ([VDOH](#))—some workers report threats and voice fears for safety ([NPR](#)).

Digital contact tracing may be useful in the pandemic, but there are big questions about privacy and consent that need to be considered ([JHUhub](#)).

The Center for Infectious Disease Research and Policy has released part 4 of their viewpoint series; the report focuses on contact tracing ([CIDRAP](#)).

The CDC has put out a communications toolkit for contact tracing ([CDC](#)).

### *Disparities*

Labs doing coronavirus testing in the US are now required to submit demographic data, including age, sex, race, and ethnicity to better understand differences with the virus ([NPR](#)).

A new review from Public Health England provides more evidence of the disparities in risk and mortality with COVID-19 in black, Asian, and minority ethnic groups ([PHE](#)).

Long read: How U.S. cities lost precious time to protect black residents from the coronavirus ([WashPo](#)).

## *Ignoring the Obvious*

The WHO is not happy with China's reluctance in sharing coronavirus information and data ([AP](#)).  
Want to pretend the pandemic isn't happening? There are Facebook groups for that ([Atlantic](#)).

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JHU CSSE: Johns Hopkins Center for Systems Science and Engineering. Coronavirus COVID-19 Global Cases. Link: <https://coronavirus.jhu.edu/map.html>

VA DOH: Virginia Department of Health. COVID-19 in Virginia, updated daily. Link: <http://www.vdh.virginia.gov/coronavirus/>

### *State of the COVID Literature*

Guardian: The Guardian. Melissa Davey, Stephanie Kirchgaessner, and Sarah Boseley. Governments and WHO changed Covid-19 policy based on suspect data from tiny US company (03 June 2020). Link: <https://www.theguardian.com/world/2020/jun/03/covid-19-surgisphere-who-world-health-organization-hydroxychloroquine>

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<https://www.tandfonline.com/doi/abs/10.1080/02763869.2020.1704597>; see also full text available on NMCP SharePoint at:

<https://esportal.med.navy.mil/nmcp/dir/dpe/et/lib/Documents/Rise%20of%20the%20Rxivs%20How%20Preprint%20Servers%20are%20Changing%20the%20Publishing%20Process.pdf>

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